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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/502,473	08/30/2004	Mark Edward Dawes	PF0136USPCt	3902
31344	7590	12/04/2006	EXAMINER	
RATNERPRESTIA P.O. BOX 1596 WILMINGTON, DE 19899			BRUENJES, CHRISTOPHER P	
			ART UNIT	PAPER NUMBER
			1772	

DATE MAILED: 12/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/502,473

Applicant(s)

DAWES ET AL.

Examiner

Christopher P. Bruenjes

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1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 24-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>20041025</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election with traverse of Group I, claims 1-23 in the reply filed on September 14, 2006 is acknowledged. The traversal is on the ground(s) that the inventions all share the same or corresponding special technical feature. This is not found persuasive because although a group of inventions is considered linked when they share a common or special technical feature, special technical feature is defined as meaning those technical features that define a contribution over the prior art. See MPEP 1893.03(d). In this case, claim 1 is found to be unobvious over the prior art especially as shown below, so none of the technical features of claim 1 define a contribution over the prior art and therefore are not special technical features.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 24-36 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on September 14, 2006.

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***Claim Objections***

3. Claims 3-23 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

4. Claims 11 and 12 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Regarding claim 1, the limitation "has a degree of shrinkage in the longitudinal dimension of the tube of about 0% to about 50% over the temperature range 55 to 100°C" renders the claim vague and indefinite because it is not understood if the limitations is merely stating that the degree of shrinkage is between 0% to 50% at some point within the temperature range claimed or if degree of shrinkage is being claimed on some type of sliding scale in which the shrinkage at 55°C is 0% and the shrinkage at 100°C is 50%. In the same manner, the limitation regarding the degree of shrinkage in the transverse dimension also renders the claim vague and indefinite. Also, it is not understood if the phrase "separating means" in the claim is meant to be a 35 U.S.C. 112, sixth paragraph, means plus function, and if so where in the specification the means plus function is defined to determine its scope.

Regarding claim 4, the limitations regarding the degree of shrinkage in the longitudinal and transverse dimensions similar to those of claim 1 also render it vague and indefinite for the same reasons as claim 1.

Regarding claim 14, the limitation "about 65-70 mole %" renders the claim vague and indefinite because it is not understood what the percentage is referring to.

**Claim Rejections - 35 USC § 103**

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 1, 4-17, and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanaoka et al (EP 1 033 319 A1) in view of Kendig (WO 01/054886 A1).

Regarding claims 1 and 4, Hanaoka et al teach an open-ended tube comprising walls of a heat-sealable polymeric film (Figures 3 or 4 and p.2, 1.5-8 and p.3, 1.49-55). The film comprises a shrinkable substrate layer. The substrate layer has a degree of

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shrinkage in the longitudinal dimension and the transverse dimension of at least 5% at 70°C and at least 10% at 80°C (p.3, 1.57 - p.4, 1.2). The film comprises a plurality of separating means such as perforations, which enables one portion of the film to be separated from an adjacent portion of the film (p.4, 1.51-56).

Hanaoka et al fail to teach that the film is a multi-layer film including an inner heat-sealable layer. However, both Hanaoka et al and Kendig teach that monolayer polyester films are exceptional for heat shrink applications, but they are poor in heat sealing (p.2, 1.22-24 of Hanaoka and p.1, 1.14-17 of Kendig). Kendig further teaches that adding an inner heat-sealable layer of amorphous copolyester to the outer substrate layer of polyester will improve the films heat sealability while not losing polyester's exceptional properties for use in heat shrink packaging (p.2 and p.3, 1.19-27). Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to add an inner heat sealable layer of amorphous polyester to a heat shrinkable outer substrate layer of polyester to improve the heat sealability of the film, as taught by Kendig.

Thus, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to

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add the inner heat sealable layer of amorphous polyester of Kendig to the heat shrinkable tube of Hanaoka et al to improve the heat sealability of the film forming the tube, as taught by Kendig.

Regarding claim 2, Hanaoka et al teach that the ratio of the shrinkage in the transverse to that of the longitudinal dimension is at least 1:1 (p.3, 1.49-55).

Regarding claims 5-9, Hanaoka et al teach the substrate is formed of polyester comprising a copolyester of terephthalic acid constituting at least 60, at least 70, or at least 80 mol% and isophthalic acid constituting the other portion of the acids and ethylene glycol forming the diol portion of the copolyester (p.3, 1.14-30).

Regarding claim 10, Kendig teach that other PET layers are laminated with a heat-shrinkable PET base film such as the film of Hanaoka et al to enhance performance of the overall structure (p.7, 1.13-20).

Regarding claims 11-14, Kendig teaches that other PET layers are laminated as shown above with regard to claim 10, but fails to teach that the actual composition of the PET layers. However, it would have been obvious to one having ordinary skill in the art that when adding multiple PET layers to the heat-shrinkable PET base film, the additional PET layers would be



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formed from similar copolyesters as the base film itself. In particular, Hanaoka et al teach that the base film is formed from copolyesters including not only multiple acid components but also multiple diol components including ethylene glycol and cyclohexane dimethanol with ethylene glycol forming at least 65 mol% of the combination (p.3, 1.26-30).

Regarding claims 15-17, Kendig teaches that the inner heat-sealable copolyester layer added to the substrate film comprises a copolyester of butylenes glycol with about 10 to 60% terephthalic acid and 10 to 60% of sebacic acid (p.5, 1.29-38).

Regarding claim 21, Kendig teaches that the inner heat-sealable copolyester layer renders the film peelable (p.13, 1.11-18).

Regarding claims 22-23, Hanaoka et al teach that the film contains multiple separating means and the each means includes one or two sets of perforations (p.4, 1.51-56).

10. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanaoka et al in view of Kendig as applied to claim 1 above, and further in view of Boyce et al (WO 99/62982 A1).

Hanaoka et al and Kendig teach all that is claimed in claim 1 as shown above and Hanaoka et al teach that the film is formed

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by stretching the film 1.2 to 8 times in the longitudinal dimension and 1.2 to 8 times in the transverse dimension (p.3, 1.49-55). Therefore, the film can have different degrees of shrinkage in different directions. However, Hanaoka et al and Kendig fail to teach that the ratio of shrinkage in the transverse dimension to that in the longitudinal dimension is greater than 1:1 up to 10:1. Boyce et al teach that when forming heat shrink packaging it is typically desirable for the film to possess balanced shrinkage properties, but where the degree of shrinkage is greater in one direction it is preferred that the transverse dimension shrinkage be greater than the longitudinal dimension (p.6, 1.31 - p.7, 1.4). Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to form a film having a ratio of shrinkage in the transverse dimension to that in the longitudinal dimension that is greater than 1:1, as taught by Boyce et al.

Thus, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to form the film of Hanaoka et al and Kendig with a ratio of shrinkage in the transverse dimension to that of the longitudinal dimension greater than 1:1 and up to 4:1, because it is preferred for the shrinkage values to be fairly balanced

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and that the larger shrinkage value should be in the transverse dimension, as taught by Boyce et al.

11. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanaoka et al in view of Kendig as applied to claim 1 above, and further in view of Hart (USPN 5,130,189).

Regarding claim 18, Hanaoka et al and Kendig teach all that is claimed in claim 1 as shown above, but fail to teach that the film further comprises a printable or ink-receiving layer on the surface of the substrate opposite to the surface in contact with the heat-sealable layer. However, Hart teaches adding a printable or ink-receiving layer to a PET base film in order to improve the printability of the film (col.1, 1.5-39 and 1.65-68). Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to add a printable or ink-receiving layer to a PET base film in order to improve the printability of the film, as taught by Hart.

Thus, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to add the printable or ink-receiving layer of Hart to the PET base film of Hanaoka et al and Kendig on the outer surface where

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printing would be intended to improve the printability of the film, as taught by Hart.

Regarding claims 19 and 20, the printable layer polymer of Hart comprises 46% ethyl acrylate, 46% methyl methacrylate, and 8% methacrylamide (col.5, 1.45-51).

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kirby (USPN 3,442,436) teaches perforations in a heat shrink and heat sealable wrapper in the form of an open-ended tube.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Bruenjes whose telephone number is 571-272-1489. The examiner can normally be reached on Monday thru Friday from 8:00am-4:30pm.

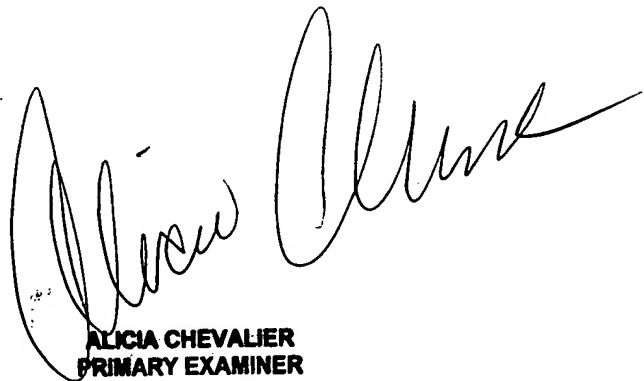
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christopher P Bruenjes  
Examiner  
Art Unit 1772

CPB *CPB*  
November 26, 2006



**ALICIA CHEVALIER**  
**PRIMARY EXAMINER**